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November 2012

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Kabani, Khatoun and Matlabi, Dariusz, "Survey of Information Technology in the Libraries of Tabriz University" (2012). *Library Philosophy and Practice (e-journal)*. 827.  
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# Survey of Information Technology in the Libraries of Tabriz University

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## Abstract

This study explores the use of information technology in the twelve libraries of Tabriz University. The research method is descriptive survey, using data needed collected through questionnaires distributed to the people responsible for the libraries. Results show that the most popular hardware includes computers, tape recorders, television, and opaque projectors. Popular Internet applications include search engines, email, blogs, news groups, conferences, chat rooms, and discussion groups. Library services include document delivery, selective dissemination of information, electronic message boards, online catalogues, and current awareness services. Obstacles to using information technology include: cost, lack of familiarity with resources, not enough trained staff, lack of support from officials, not enough knowledge of English, hardware and software problems, and lack of electronic resources.

## Introduction

Universities have research as a mission and have strengthened this mission by establishing libraries and information centers. Academic libraries are organized to serve students and faculty as well as to increase the results of research and teaching. With the introduction of computers, libraries have provided significantly easier access to the information and use of materials for the students (Neshat). Information technology helps academic libraries to perform their responsibility faster and thus helps the academic progress carry on smoother.

A great deal of research have been carried out on information technology through works of Davarpanah (2001), Azimi Khabazian (2007), Mohsenzadeh (2009), Imanikia (2008), Engstrom (2001), Rao and Ramana (2003), and Petrauskiene (2007), and it is evidence for its importance. Employment of the modern technology in current libraries comprises public services and technical services. Information technology has used computer system, scanners, modems, fax and Internet as far as technical services are concerned in libraries. However, public services employ computer programs that provide Internet services such as E-mail, selective dissemination of information (SDI), current awareness services (CAS), on line public access catalog (OPAC) along with electronic bulletin board.

Tabriz is amongst one of the industrial cities in Iran with substantial role in developing economy and technology in Iran. Thus, the University of Tabriz has been of significant importance in the region. The university has founded in 1947 and it boasts up to 11,000 students and laboratories, museum, and research centers.

Due to the importance of information technology and its effect on the libraries this study is aiming at finding out using rate of information technology in libraries of Tabriz University and what the problems are in using them.

## Objectives

The main concern of our study is to quantify the use of information technology in libraries of Tabriz University as well as specifying the problems in this regard thus. The following questions are found to be of central importance in this paper:

- 1: How is hardware and software application in libraries of Tabriz University
- 2: How is the use of information networks in libraries of Tabriz University
- 3: How is the level of using information services in libraries of Tabriz University
- 4: How are the services provided through university electronic catalogues
- 5: What are the obstacles and problems in utilizing information technology in libraries of Tabriz University

## Research Background

A great deal of study has been carried out of the use of information technology in libraries. In this arena Librarian and user's stance concerning the use of information technology, the efficiencies of such technologies, the means of conducting such technologies and the way to deal with information technology has been studied.

A positive attitude by libraries has an influence on use of information technology. Farhadi (1999) assessed positive view of librarians in his research although he believes that information technology poses some troubles for librarians, however, most of the librarians have positive position towards that.

Information technology is considered an inseparable part of any library throughout the world. Understanding the advantages help utilizing more information technology in libraries and institutions. Nakhoda believes that use of the information technology in libraries and institutions leads to enhanced effectiveness in libraries and as a result more practical benefits follows such institutions.

Rao and Ramana (2003) believe that implementation of IT lead to quicker fulfillments within library and more effective services follows thus it greatly improve the potential of services, in his research he pointed out that the Indian libraries are actively involved in IT by which they offer information to their users.

Information devices are being used in variety of hardware, audiovisual materials. The rate of use, however, differs from library to library. Information devices contain both auditory and visual devices. Computers and hardware information centers including printer and many other hardware devices has the highest application in libraries. Farhadi (1999). Imanikia (2008), Mohsenzadeh (2009), Mehpuyan (2001) have conducted research on libraries in Tehran and come to conclusion that the facilities and far from adequate and they listed priorities in the libraries as

1. Internet
2. Databases
3. CD-ROM database
4. Instruction disk
5. Overhead
6. Instructional films
7. Cassettes
8. Slides
9. National TV channels.

Mohsenzadeh (2009) concludes that the use of information devices has reached to highest level through use of compact memories. Information services are considered very important in areas including medicine, engineering and technology. Regarding Internet the use of websites and email and among search programs Google and Yahoo has the highest rate.

In today's organization personnel serve as the most essential part of it in the progress of the organization. Developing a plan to find highly qualified personnel is essential to have new policies made by managers (Nakhoda

2005). Meadows and Bukhari (1992) believe that usage of information technology is on parallel within UK. The result shows a rapid growth in the use of information technology. Petrauskien (2007) also emphasizes the use of electronic information resources and believes that libraries electronic database and friend are the key resources for understanding information centers.

Library user population makes use of technologies in the libraries for lots of different reasons. The most important reasons are to carrying out researches, finding out day to day information, scientific connection with other academic staff, educational programs, and publication of research papers, elimination of information needs and to facilitate the educational and scientific tasks (Azimi Khabazan 2007, Meadows and Bukhari 1992, Petruskien 2007)

Iranian academic libraries have many structural barriers regarding successful use of information technology. These barriers include governmental, economical, social, cultural, official, technical and managerial grounds. Davarpanah believes that in order to solve such problems there is an urgent need in long term and short term policies.

Priority is essential to be given to designing and shaping databases in libraries in Iran so that the technological needs for the improvement of the research and information domain will be achieved (Davarpanah 2001). Many libraries are in trouble finding workforces, equipment, organization and acquisition of such equipment (Mohsenzadeh 2009). Lack of understanding of information technology by librarians, lack of sufficient training, being no IT as a sample, lack of trained staff and financial problems and no English proficiency and lack of support from managements and authorities are amongst the most crucial factors in effective usage of IT in libraries (Farhadi 1999, Mohsenzadeh 2009, Ojedukom, 2003).

## Research Findings

In this section research findings will be presented according to research questions.

### 1: *Hardware, software, and electronic resources*

Table 1: Hardware

Equipment	Central	Literature	Humanity	Training Sciences Department	Computer Science	Urban Engineering	Mechanics	Chemistry	Mathematics	Physics	Agriculture	Natural Sciences	Total					
Computer	1	1	4	1	1	0	5	1	2	1	1	0	3	4	4	6	9	19
Scanner	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
Printer	1	2	2	2	1	2	1	3	1	1	1	2	1	2	1	2	8	28
supporter device	4	1	-	1	-	-	-	2	-	-	-	1	-	-	-	-	9	-
DVD reader	4	0	-	5	-	1	-	5	1	-	-	-	-	-	-	-	3	5
Modem	4	-	-	5	1	1	2	-	-	-	-	-	-	-	-	-	2	3
projector	3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	6

Table 2: Electronic resources

Library Resources	Book (CD)	Book (online)	Journal (CD)	Journal (online)	Thesis (CD)	Thesis (online)	Database (CD)	Database (online)
Central	1969	-	-	-	4,500	-	200	5
Literature Department	-	-	-	-	-	-	-	-
Humanity Department	-	-	-	-	200	-	-	-
Training Sciences Department	-	-	-	-	-	-	-	-
Electronics and Computer Science	100	-	-	-	-	-	-	-
Urban Engineering Department	-	-	-	-	-	-	-	-
Mechanics Department	-	-	-	-	-	-	-	-
Chemistry Department	1,500	1,500	50	2,500	600	500	5	5
Mathematical Department	104	1,000	5	1,200	20	500	-	-
Physics Department	-	-	-	-	-	-	-	-
Agriculture Department	320	-	-	234	680	-	5	-
Natural Sciences Department	-	-	-	-	50	-	-	-
Total	3,993	2,500	55	3,934	6,050	1,000	210	10

## 2: Internet

Table 3: Use of Internet services

		Available services						
		Internet	Search engines	Blogs	E-mail	newsgroups	discussion	Conferences
Central	*	*	—	*	—	—	—	*
Literature Department	*	*	—	—	—	—	—	—
Humanity Department	*	*	—	—	—	—	—	—
Training Sciences Department	*	*	*	*	*	—	—	—
Electronics and Computer Science	*	*	*	*	*	*	*	*
Urban Engineering Department	*	*	*	*	*	—	—	*
Mechanics Department	*	*	—	—	—	—	—	—
Chemistry Department	*	*	*	*	*	*	*	*
Mathematical Department	*	*	—	—	—	—	—	—
Physics Department	—	—	—	—	—	—	—	—
Agriculture Department	*	*	—	*	—	—	—	—
Natural Sciences Department	*	*	*	*	*	—	—	*
Total	11	11	5	7	5	2	5	

## 3: Information services

Official document delivery services are done in information center within central library and libraries of chemistry, mathematics and physics department in Tabriz University. SDI Services are delivered in central library of the university. Current information services are available in Central Library as well as libraries of chemistry, and mathematics departments. Electronic bulletin board and online catalogue are available only in information center of Department of Chemistry.

Our research has demonstrated that 50% of libraries in Tabriz University employ email services for the following reasons. 1: receiving information needs and requests 2: current awareness delivery 3: SDI services 4: deliver new information about library and interlibrary loans.

#### 4: condition of library service delivery through website in Tabriz University

Central library in Humanity department, agriculture and natural sciences departments in Tabriz University are equipped with their own website through which services including SDI services, current awareness services, e-mail services, queries from librarians, subject searching, teaching the users and booking the information are delivered.

Table 4: access to resources via website of Tabriz University.

Access to resources	Databases	Online catalogs	Full text	E-journals	Websites
Central	*	*	*	*	*
Literature Department	-	-	-	-	-
Humanity Department	-	-	-	-	-
Training Sciences Department	-	-	-	-	-
Electronics and Computer Science	-	-	-	-	-
Urban Engineering Department	-	-	-	-	-
Mechanics Department	-	-	-	-	-
Chemistry Department	*	*	*	*	*
Mathematical Department	-	*	*	*	*
Physics Department	-	-	-	-	-
Agriculture Department	-	-	-	-	-
Natural Sciences Department	-	-	-	-	-
Total	2	3	3	3	3

#### 5. Obstacles

Table 5: Obstacles

Barriers	Cost	Knowledge	Trained staff	English Knowledge	Administrative support	Hardware and Software	Internet	E-resources
Central	*	*	*	*	-	-	-	-
Literature Department	-	*	*	-	-	-	-	-
Humanity Department	*	*	-	-	-	-	-	-
Training Sciences Department	*	*	*	*	*	*	-	-
Electronics and Computer Science	*	*	*	*	*	*	*	*
Urban Engineering Department	*	*	*	*	*	*	*	*
Mechanics Department	-	-	-	-	-	-	-	-
Chemistry Department	*	*	*	*	*	*	*	*
Mathematical Department	*	*	*	*	*	-	-	-
Physics Department	-	*	*	*	*	*	*	-
Agriculture Department	*	-	*	-	*	*	-	-
Natural Sciences Department	*	-	-	-	*	*	*	-
Total	9	9	9	7	8	7	5	3

#### Conclusion

The results demonstrate that the most hardware devices available in Tabriz University include computer, printer and scanner and the most electronic resources (including CD or online) include thesis, book, and magazine and databases respectively.

Library of Chemistry Department, Mathematics Department, and central contain the most abundant electronic resources and library of literature and foreign languages department, training sciences, urban design, mechanics and physics didn't have any electronic resources. In a same research Mohsenzadeh (2009), Farhadi (1999) and Imanikia (2008) obtained nearly the same results.

Eleven libraries under assessment out of twelve contain Internet network except physics department. The most widely used facilities include search engines (eleven libraries), e-mail post (seven libraries), weblog, newsgroups and conferences (five libraries) and finally group discussions (two times) respectively. Use of newsgroups and group discussions for better association between lecturers and students has been sporadic.

Document delivery in four libraries, SDI services in two libraries, electronic bulletin board in two libraries, online catalogs in two libraries and current awareness services in three libraries has been delivered. In sum, information services are not considered superior and the majority of libraries do not provide required information despite the urgent need of the academic staff and students to libraries information resources and services.

Half of the libraries use the home link of library on university website and e-mail to connect to students, answer their responses, current awareness, SDI, delivering new item regarding libraries. Databases has been available in two libraries and access to electronic libraries catalogs, full text resources and electronic magazines has provided by three libraries Mohsenzadeh (2009) has obtained the same results in libraries under assessment.

Also many libraries in Tabriz University (eleven libraries), are facing problem delivering services to their clients. Problems are given priority as follow, high costs of on-line access to databases, lack of knowledge by clients to utilize information technology, lack of skilled and trained staff to use information technology, lack of support by concerned authority in management arena in libraries, lack of English proficiency by librarians in using information technology, hardware and software problems, Internet connection problems and lack of electronic resources. Farhadi (1378), Mohsenzadeh (2009), Muko and Midoz (1998), Ojedokum (2003) reach the same results. Imanikia (2008) on the other hand outlined the main factors in ignoring information technology in libraries as lack of training courses and lack of information technology in libraries.

## **Suggestions**

Lack of access to advanced electronic resources particularly in medical and technical science departments in which academic members need more novel information lead to a sharp decrease in scientific achievements.

Access to electronic information resources via Internet will help the academic members and students to increase their potential in getting new scientific attainments, in this regard libraries play a key role in providing up-to-date databases to their clients. Librarian managers thus have to provide easier access to technology for clients.

Providing libraries with Internet services will lead to elevated use of such libraries by students, thus authorities in libraries of Tabriz University are required to use such techniques including supplying Internet facilities such as email within library, establishing discussion and news groups. However such techniques are so rare in Tabriz university libraries.

Information services like current awareness services are the essence of IT within libraries and libraries can attract more users by such strategies. There is a need in Tabriz libraries to form a portal in which both central and departmental libraries give services to their clients. In this case union catalogs of libraries will be available.

In universities with high delivery of graduate certificates, it is essential to form electronic databases (scientific journals, essays etc.) to avoid any revision. This should be considered effectively by concerned authority within libraries.

Training courses as well as providing useful guidebooks, training through library's website are essential in dealing with problems such as lack of information of the staff and academic employees in using IT. Hiring well trained and skilled staff for libraries can help solve these problems effectively.

Lack of English language proficiency by librarians has posed a trouble in using IT in libraries. This trouble applies to 50% of librarian under investigation. Language training courses are essential for librarians in Tabriz University.

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